

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 097521,769 | 03/09/00 | JOHNSON | 99-40165-US |

HZ12/0829

LOUIS M. HEIDELBERGER, ESQUIRE
2500 ONE LIBERTY PLACE
1650 MARKET STREET
PHILADELPHIA PA 19103

EXAMINER

HARTTER, A

ART UNIT

PAPER NUMBER

1631

DATE MAILED: 08/29/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/521,769

Applicant(s)

JOHNSON, PETER C

Examiner

Amy Hartter

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 10-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Restriction/Election

Restriction to one of the following inventions is required under 35U.S.C. § 121.

- I. Claims 1-9 are drawn to selection methods classified in class 702, subclass 19.
- II. Claims 10-18 are drawn to selection methods classified in class 395, subclass 500.05.
- III. Claims 19-29 are drawn to selection methods classified in class 435, subclass 004.
- IV. Claims 30-40 are drawn to selection methods classified in class 435, subclass 004.
- V. Claims 41-42 are drawn to calculation methods classified in class 702, subclass 19.

The inventions are distinct, each from the other for the following reasons:

Group I is distinct from Group II in the matter that in Group I the claims are limited to the classification of the types of vegetation that will be selected as well as the description of the imaging system that will be employed in the invention. Group II however introduces the indexing portion of the invention and is separate and distinct from the methods that are employed within the reaches of the first Group.

Group III differs from Group I in the fact that Group III is directed towards selection methods for enhancing the genetic use of certain cultivars while Group I involves the imaging system of the invention.

Group IV differs from Group I in that Group IV deals with the construction of an entire processing control system involving genetic engineering components as well as other selection criteria. This is distinct from Group I which deals only with the specifications of the imaging system that is involved with the invention and can act independently of one another.

Group V consists of the information system that is used for the non-random selection of a crop plant. This is inherently distinct from the portion of the invention that is characterized in Group I and limited to the imaging portion of the invention.

Group II differs from Group III of the invention due to the fact that the Group II is involved in the selection by way of the indexing portion of the invention while Group III focuses on the evolution of the vegetative product through the use of genetic techniques.

Group II differs from the fourth Group in that the second Group is again focused on the narrow setting of the imaging portion of the invention while Group IV is involved in the construction of the entire processing system.

Group II differs from Group V due to the fact that Group V encompasses an information system to make the non-random selection of the discussed crop plant while the second Group describes only the imaging system that is used within the invention two inventions can be made use of separately and distinctly.

Group III differs from Group IV in that Group III deals with improving and evolving the vegetative species through genetic testing while Group IV is involved in a construction of an entire processing system.

Group III differs from Group V in that Group III treats the subject of improving and evolving the vegetative species and Group V is the definition of an information system.

Group IV differs from Group V in that Group IV treats the subject of improving and evolving a vegetative species while Group V is concerned with the development of an information system.

During a telephone conversation with Nanda Kumar on 4/4/01 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-41 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Detailed Action

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or in an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 (c) of this title before the invention thereof by the applicant for patent.

Claims 1-3 and 7-9 are rejected under 35 U.S.C. §102 (b) and (e) as being clearly anticipated by Hanseler U.S patent no. 5370713.

The aforementioned prior art describes an automatic plant dividing system, which is used for the selection of the best possible plant product. The patent employs and imaging system for the elucidation of said selection as does the present patent and has a guidance system in which to attain the greatest uniform quality.

Claims 1-3 and 7-9 are rejected due to anticipating the instant claims that are embraced in said prior art. Patent 5370713 states in the abstract:

"An apparatus for dividing plant materials comprising, a first conveyor to transport a try of the like so as to selectively position generally upstanding plant material disposed in the tray, harvesting means to grip and sever plant material adjacent its base when selectively positioned by the first conveyor and to transport the plant material to a dividing station, image signal generating and processing means to divide the plant cutting and according to predetermined rules related to the structure of plant material and planting device to transport and position the divided plant material in a growing medium."

The applicant's first claim proceeds as follows:

"1. A method for the non-random selection of a raw product of a selected plant for processing into a uniform quality end product comprising the steps of

Art Unit: 1631

- (a) obtaining a sample of the raw product of the selected plant;
- (b) analyzing the sample to determine at least one structural or functional index associated with the raw product;
- (c) providing a plurality of product processing feature range set records, wherein each of the records associates a given set of product processing data with a corresponding product processing feature range set, and wherein, for each such record, a uniform quality end product results from application of the given set of product processing data to raw product falling within the associated product processing feature range set;
- (d) determining the suitability of the sample obtained in step (a) for processing into the uniform quality end product by comparing at least one structural or functional index to product processing feature range sets in the records; and
- (e) if the at least one structural or functional index matches one of the product processing feature range sets in the records then, selecting the raw product so that when processed under a given set of processing parameters, the selected raw product results in the uniform end product."

The instant claims and said Patent are both endeavors to produce a system, which will yield the most uniform quality plant product. The patent 5370713 begins the selection process with a conveyor belt and the present case uses techniques of analysis. Using a reasonable interpretation of the instant claims it can certainly be said that analysis encompasses the use of conveyor belts as part of a separation and selection technique. Thus parts a and b of claim one are addressed in this portion of patent 5370713.

Secondly the index and ranges set forth in the instant case to achieve uniformity in the plant product is mirrored in and achieved by the patent by the use of

Art Unit: 1631

"predetermined rules related to the structure of the plant material". Again if we address ourselves to a reasonable interpretation of the patent 5370713 the use of indexes and ranges could and are embodied within rules. Thus the patent 5370713 mirrors parts d and e of the instant claim 1.

Thirdly the second claim of the instant application speaks to the nature of the selected plant product. Since patent 5370713 speaks to all plant products the claim 2 from the present application is seen within the perimeters of the patent.

Claim 3 of the application address the nature of the imaging system and declare the specifics of said imaging system. The nature of the imaging system in patent 5370713 is not put forth and thus would encompass specifics of the instant application.

Claims 7-9 are more specific embodiments of the indexes and ranges that are discussed in parts (d) and (e) of claim 1. As addressed in the earlier portion of the office action, the index and ranges are included in the claims so that uniformity may be achieved, this same goal is embodied in the portion of the Patent 5370713 that discusses "predetermined rules related to the structure of the plant material". The rules in the Patent are of the same essence as the indexes and ranges of the instant application.

Thus claims 1-3 and 7-9 are rejected due to the evidence of the prior that discloses this invention.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 103(a) that form the basis for the rejections under this section made in this Office Action.

Art Unit: 1631

A person shall be entitled to a patent unless

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 1021 of this title, of the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 103 (a) because they are obvious in view of the art by Chappelle, E.W. ("Laser induced fluorescence of green plants. 1: A technique for remote detection of plant stress and differentiation." Appl. Opt. 23, pages 134-138 (1984).

Claims 4-6 of the instant application are directed toward the microscopic or telescopic devices that are used in the imaging portion of the invention. The article describes how telescopic imaging is used to establish differentiation between corn and soybean plants as well as showing methods to establish and identify water stress in soybean plants as well. This makes obvious to one skilled in the art the selection perspective of the instant application. The water stress data rendered in the article suggests that the better, or less stressed, plants versus the worse, or less stressed, plants as product selection. This suggests therefore, the product selection achieved by the instant application.

Thus it would have been obvious to someone of ordinary skill in the art at the time of the instant invention because patent 5370713 describes the indexing and

Art Unit: 1631

selection of process and Chappelle motivates or suggests telescopic imaging and selection of a product., thus resulting in the instantly claimed invention.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Hartter whose telephone number is (703) 305-1696. The examiner can normally be reached Monday-Friday from 8:00 to 4:30 p.m. (Eastern Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached at (703) 308-4028. The fax phone numbers for group 1600 is (703) 308-4242 and (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application should be directed to the Patent Analyst, Kim Davis, whose telephone number is (703) 305-3015 or to the Technical Center receptionist whose telephone number is (703) 308-0196.


AJH


ARDIN H. MARSCHEL
PRIMARY EXAMINER